

Serial No. 09/515,348  
Attorney Docket No. F0039  
Firm Reference No. AMDSP0388US

Reply to Office Action Dated July 29, 2003  
Reply Dated November 25, 2003

## REMARKS

Claims 1-20 are pending. Claim 1 has been amended to clarify its distinction over the prior art. Claim 6 has been amended to more clearly recite that which the Applicant regards as his invention. Three drawing replacement sheets are enclosed, amending reference numerals and lead lines to correspond with the specification.

### I. DRAWINGS

The drawings have been amended to include changes to FIGS. 8, 10 and 11. Specifically, the lead line to 350' in FIG. 8 has been changed to a dashed lead line to correspond to the dashed lines used to identify the features associated with 350' in FIG. 8. Additionally, reference numerals 352 and 352' have been switched to identify each feature according to the description in the specification and other drawings. Further, the lead lines for 352' and 354' have been changed to dashed lead lines. With reference to FIG. 10, the dashed feature on the left side of the drawing labeled 354' has been replaced with the correct dashed feature 354', see, FIG. 9, for example. Additionally, lead lines and reference numerals have been changed/added to correctly identify the remaining features. With reference to FIG. 11, the features on the left side of the drawing labeled 350' and 350" have been relabeled 352' and 352", see, FIG. 9, for example. Additionally, lead lines and reference numerals have been changed/added to correctly identify the features 354' and 354", i.e., both features were labeled 354', see, informal FIG. 11, for example. No new matter has been added.

### II. AMENDMENTS TO THE SPECIFICATION

The disclosure is objected to for using trademarks in a manner that might adversely affect their validity as trademarks. Accordingly, the Applicant has amended the disclosure to identify possible trademarks in all caps. Further, the disclosure is objected to for informalities including a typographical error. The Applicant has amended the disclosure to correct informalities. No new matter is believed to have been added. Therefore, withdrawal of the objections is respectfully requested.

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### **III. REJECTION OF CLAIMS UNDER 35 U.S.C. § 112**

Claim 6 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Claim 6 has been amended to more clearly recite that which the Applicant regards as his invention. Specifically, claim 6 has been amended in accordance with the Examiner's interpretation of the claim. Thus, amended claim 6 particularly points out and distinctly claims the subject matter which the Applicant regards as his invention. Therefore, withdrawal of this rejection is respectfully requested.

### **IV. REJECTION OF CLAIMS UNDER 35 USC §102(e)**

Claims 1, 3, 7-9 and 13-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,091,845 issued to Pierrat et al. ("Pierrat"). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Pierrat discloses a technique for inspecting photomasks. The technique employs simulated images of a resist pattern. Col 6, lines 4-9. In one embodiment, a simulated image of an original pattern is compared to a simulated image generated from a pattern captured from a photomask manufactured from the original pattern. Col 1, lines 61-64. In another embodiment, simulate images generated from captured data from two different instances of the same original pattern formed in a photomask are compared. Col 6, lines 45-53. Pierrat does not disclose a method for evaluating a photomask.

Claim 1 as amended recites a method of analyzing a wafer manufacturing process. The method includes, inter alia, "evaluating the portion of the mask by comparing the simulated wafer structure to a desired wafer structure." Pierrat does not disclose evaluating the portion of the mask by comparing a simulated wafer structure (image) to a desired wafer structure. To the contrary, Pierrat discloses comparing a simulated image 180 constructed from a resulting digitized image 160.2 of a mask pattern to a simulated image 185 constructed from image data derived from an original pattern data 150. In another embodiment, multiple acquired images 160.1 and 160.2 of a mask pattern are used to construct simulated images 180 and 182. The

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simulated images 180 and 182 are compared by defect detection 146 for defects. Col 6, lines 45-65. Thus, Pierrat is comparing mask images to detect defects in the mask.

Therefore, since Pierrat does not teach or suggest one or more of the features as claimed in amended claim 1, claim and the claims that depend therefrom are patentable over Pierrat for at least the reasons stated above.

#### V. REJECTION OF CLAIMS UNDER 35 USC §103(a)

Claims 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pierrat and U.S. Patent No. 6,477,265 issued to Sheng ("Sheng"). Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pierrat, Sheng and further in combination with U.S. Patent No. 6,263,292 issued to Fiekowsky ("Fiekowsky"). Claims 4-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pierrat and Fiekowsky. Withdrawal of the rejections is respectfully requested for at least the following reasons.

Claims 4-6 and 10-12 are patentable over Pierrat for at least the reasons stated above. Sheng and Fiekowsky alone or in combination do not make up for the deficiencies of Pierrat. That is, neither Sheng and/or Fiekowsky teach or suggest evaluating a mask by comparing a simulated wafer structure (image) to a desired wafer structure. Sheng discloses a system and method for detecting defects in integrated circuit wafers related to photolithographic processing of the wafers. Abstract. Fiekowsky discloses a measurement tool that objectively and repeatedly measures defects for determining photomask disposition. Col 4, lines 19-25. Further, the resulting method from the combined teachings of Pierrat and Sheng and/or Fiekowsky would not result in the method that evaluates a mask as recited in amended claim 1. Thus, there would be no motivation to combine the teachings of Pierrat with Sheng and/or Fiekowsky.

Therefore, since Pierrat alone or in combination with Sheng and/or Fiekowsky does not teach or suggest one or more features as claimed in amended claim 1, the claims that depend therefrom are believed to be in condition for allowance for at least the reasons stated above.

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## VI. CONCLUSION

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present invention.

Any fee(s) resulting from this communication is hereby authorized to be charged to our Deposit Account No. 18-0988; Our Order No. F0039 (AMDSP0388US).

Respectfully submitted,

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